



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,455	06/26/2003	Ashish M. Sukhadia	2039.014082/RFE	3481
37774	7590	08/25/2005	EXAMINER	
WILLIAMS, MORGAN & AMERSON, P.C. 10333 RICHMOND, SUITE 1100 HOUSTON, TX 77042			CHOI, LING SIU	
			ART UNIT	PAPER NUMBER
			1713	

DATE MAILED: 08/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/606,455	<b>Applicant(s)</b> SUKHADIA ET AL.	
	<b>Examiner</b> Ling-Siu Choi	<b>Art Unit</b> 1713	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 March 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 9-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

15

### **DETAILED ACTION**

1. This Office Action is in response to the Amendment filed March 2, 2005. Claims 1-8 were canceled and claims 9-12 are now pending. In view of the Amendment, claim objections are moved. Claim rejections under 35 USC § 102/103 are maintained.

#### ***Claim Rejections - 35 USC § 102/103***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 9-12 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Norwood et al. (US 4,312,967).

A composition comprising an ethylene/higher mono-1-olefin copolymer having		
a	a density	= about 0.935-0.96 g/cc
b	a high load melt index	= about 0.5-30 g/10 min
c	a critical shear rate for the onset of melt fracture	> about 1200 sec <sup>-1</sup>

(summary of claim 9)

Norwood et al. disclose a polymerization process in the presence of a catalyst comprising (a) chromium oxide on a titanium-containing silica support having at least about 3 wt % titanium and (b) an organoboron promoter, wherein the component (a) is activated by **calcining at a temperature within the range of about 400° to 1000°C** (about 750-1830°F) in a dry atmosphere containing oxygen (abstract; col. 5, lines 12-15). Attention is drawn to run 14 in Table I, wherein the reactor temperature is 91.1°C and the thus obtained polymer has **HLMI of 10.2 g/10 min.** and **density of 0.950 g/cc.** However, Norwood et al. are silent on the specific critical shear rate for the onset of melt fracture. In view of the substantially identical catalysts used in the present invention and the disclosure of Norwood et al. and the substantially identical HLMI and density for the polymers obtained by using the corresponding catalysts, the critical shear rate for the onset of melt fracture would possess the claimed values. Since the PTO does not have proper means to conduct experiments, the burden of proof is now shifted to applicants to show otherwise. *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977); *In re Fitzgerald*, 205 USPQ 594 (CCPA 1980).

***Response to the Amendment***

Art Unit: 1713

5. Applicant's arguments filed on March 2, 2005 have been fully considered but they are not persuasive.

Applicants, "the product of Norwood's Run 14 would not have a critical shear rate value of greater than about  $1200\text{sec}^{-1}$ . The catalyst used in Run 14 was activated at  $677^{\circ}\text{C}$ . The present specification teaches catalyst activation at about  $455^{\circ}\text{C}$ - $565^{\circ}\text{C}$ . It also teaches lower catalyst activation temperatures delay the onset of worms, i.e. increase the critical shear rate values of polymers produced using those catalysts..."

It is noted that reducing the activation temperature for catalyst will lead to reducing the critical shear rate value of the product. However, in the absence of the quantitative relation between the activation temperature for the catalyst and the critical shear rate value for the resulting polymer. The conclusion that the catalyst being activated at  $677^{\circ}\text{C}$  will not necessarily lead to the resulting polymer having the critical shear rate value lower than about  $1200\text{sec}^{-1}$ .

Applicants, "although Norwood refers to catalyst activation at temperatures as low as  $400^{\circ}\text{C}$ , Norwood did not recognize that low catalyst activation temperatures can raise critical shear rate values. ... By missing these observations, Norwood does not guide the skilled artisan to prepare copolymer with high critical shear rate values..."

The present claims are drawn to a composition comprising a copolymer instead of a process to raise the critical shear rate value of the polymer. Since Norwood recognizes to use the activation temperatures as low as  $400^{\circ}\text{C}$  for the catalyst, the polymer disclosed by Norwood would possess the critical shear rate value higher than about  $1200\text{sec}^{-1}$ .

Art Unit: 1713

Thus, the present claim rejections are maintained.

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling-Siu Choi whose telephone number is 571-272-1098.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reach on 571-272-1114.

Application/Control Number: 10/606,455

Page 6

Art Unit: 1713

*L. S. Choi*

**LING-SUI CHOI  
PRIMARY EXAMINER**

August 20, 2005